Year 7 Knowledge Organiser

Term 3

Words of protest: World War and Britain

In this unit of work, you will read about poets and their attitudes to war across the ages. We will be studying ancient epic poems about bravery and monsters, poems which paint war as a 'game', poems which show the horrors of combat, the devastation of families, lives and even cultures to modern day poems about warfare and its effects on the soldiers themselves.

You will be studying a range of types of poem from the ballad all the way to the sonnet. We shall explore together why the poets chose the forms they did, why they held the views they did and what they hoped to achieve through their poetry.

Key poem types:

Ballad: These repetitive poems tell a story and usually share a moral message.

Dramatic monologue: This type of poem is designed to sound as if the subject of the poem is having a conversation with you – the reader.

Didactic poems: These usually carry a strong moral message

Elegy: These are reflective poems used mostly to celebrate someone who has died.

Epic: These are usually very long stories about the exploits of a hero or heroes.

Ode: Usually written in celebration of a person or subject.

Your assessments:

How does the poem – The Soldier by Rupert Brooke– show the poet's attitude towards war?

Write a description entitled 'Warfare' based on either of these images:

Keywords:

Attitude	Bravery
Context	Fellowship
Patriotism	Post Traumatic Stress Disorder
Cowardice	Boer War
Honour	Civilian
Duty	Vietnam

These are the time periods we will be visiting. It is a good idea to learn about these time periods as they will help you to understand more about the poem, the poet and their motivations.

4th century BC (Beowulf), 1890-1900 (The Boer war), 1914-1918 (WW1), 1939-45 (WW2), 1955-75 (The Vietnamese War), 1990-91 (The Gulf War)

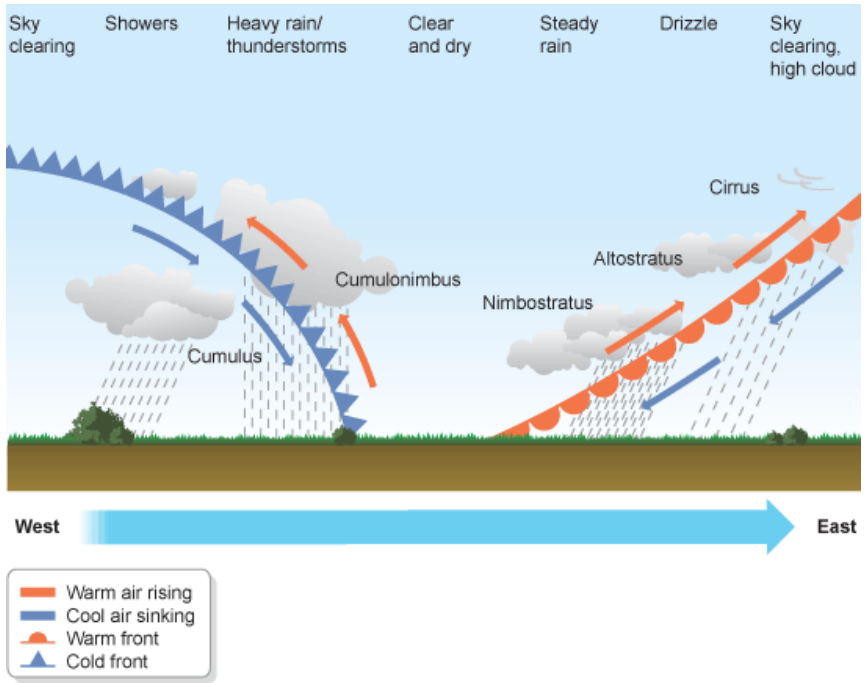
Geography - Year 7 Term 3 - Weather

Key Terms

Weather	The day to day conditions of the atmosphere including temperature, precipitation, pressure and wind.
Visibility	The distance that can be seen.
Temperature	A measure of how hot or cold it is.
Precipitation	Water in any form that falls to Earth. It includes rain, snow, sleet, hail and fog.
Pressure	The weight of air pressing down on the surface of the Earth.
Aspect	The direction which a slop or house faces.
Anticyclone	A weather system with high pressure at its centre that brings settled, bright and dry conditions.
Depression	A weather system with low pressure at its centre that brings cloud, wind and rain.
Climate	The average weather conditions of a place measured over a period of years.
Front	The boundary between warm and cold air.
Meteorology	The study of weather and climate.
Microclimate	The conditions of the air in a very small area.

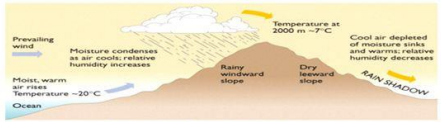
BBC Weather symbols

15	Temperature degrees above 0°C.		Sunny intervals
-5	Temperature below freezing		Rain
26	Sunshine and expected temperatures 25° or more		Rain and sunny intervals
10	Wind speed and direction		Snow
FOG	Fog		Hail
	Fine weather clouds		Sleet
	Dull weather clouds		Thunderstorm

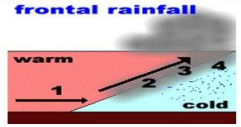


Types of Rainfall.

- **Relief Rain.**
- Where ? Britain N+W mountain areas around the world.



- **Frontal Rain**
- Across Britain.
- Warm air collides with
- Cold air.



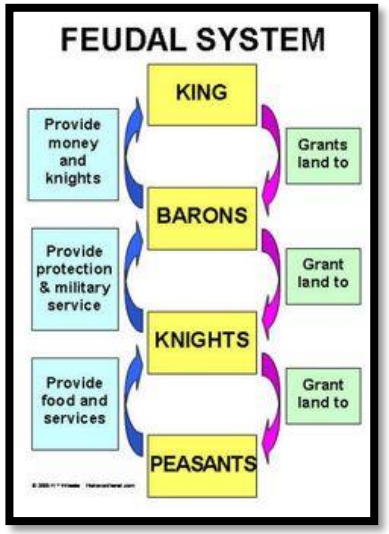
- Convectional Rain
- High Temperatures
- Tropical Areas
- Barbados

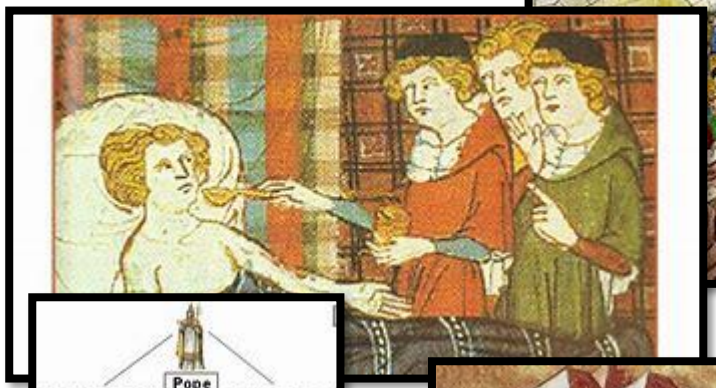
Anemometer	An instrument used to measure wind speed.	
Thermometer	An instrument used to measure temperature.	
Hygrometer	An instrument used to measure humidity = the amount of water vapor in the air.	
Wind Vane	An instrument used to show the direction of the wind.	
Barometer	An instrument used to measure atmospheric pressure = high and low pressure.	
Rain Gauge	An instrument used to measure rain.	

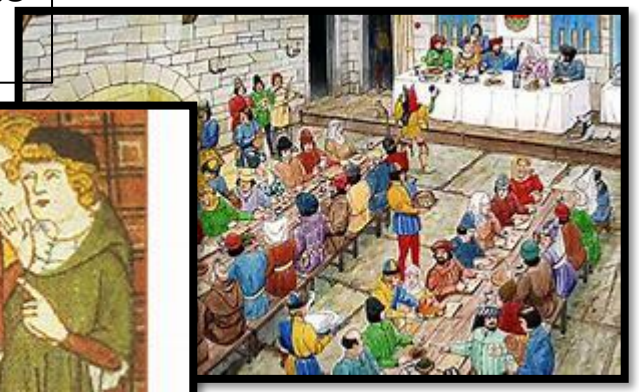
Year 7 history knowledge organiser term 3: What mattered to medieval minds?

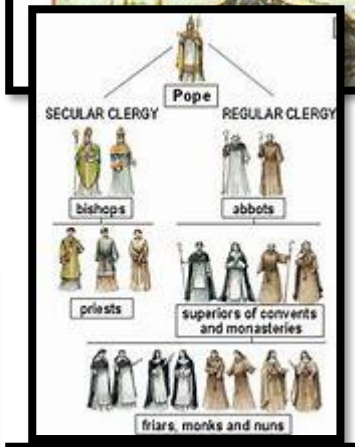
Keywords and definitions

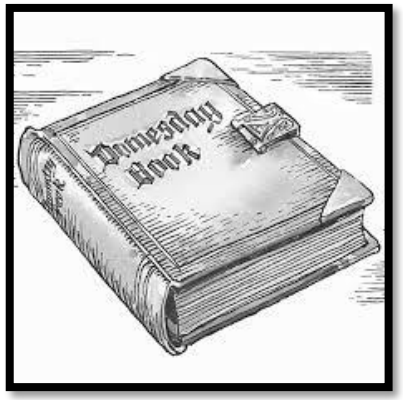
Medieval	The period between 1066-1500
Feudal system	The social structure of Medieval England
Villein	Peasant at the bottom of the Feudal system
Baron	Noble land owner that pledged their loyalty to the King
Clergy	Officials of the Christian Church- their job is to work for the Church.
Motte and Bailey	The first type of castle made by William. It was made out of wood and had a higher Motte part and a lower Bailey part
Tithe	A tax collected and paid to the Church
Doom painting	A painting showing people being sent to Heaven or Hell on the Day of Judgement
Squire	The personal servant to a knight, normally aged between 14 and 21
Monastery	A building housing a religious community

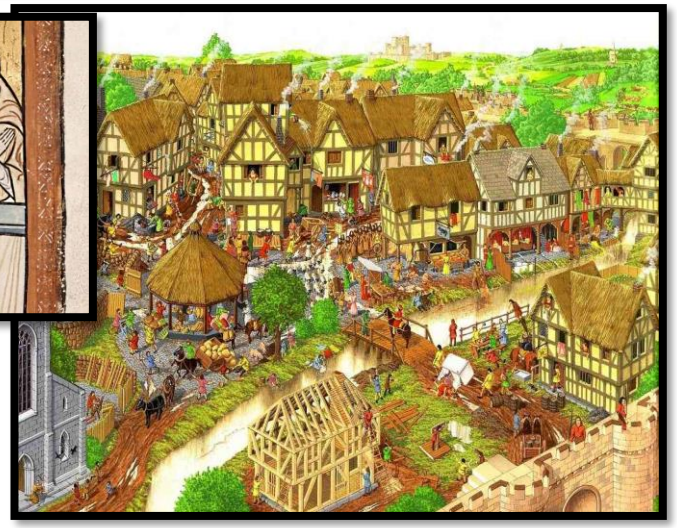


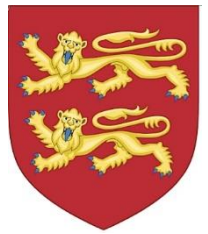












YEAR 7 – LINES AND ANGLES

Constructing, measuring and using geometric notation

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

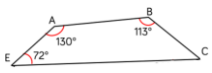
- Use letter and labelling conventions
- Draw and measure line segments and angles
- Identify parallel and perpendicular lines
- Recognise types of triangle
- Recognise types of quadrilateral
- Identify polygons
- Construct triangles (SAS, SSS, ASA)
- Draw Pie charts

Keywords

Polygon: a 2D shape made with straight lines
Scalene triangle: a triangle with all different sides and angles
Isosceles triangle: a triangle with two angles the same size and two angles the same size
Right-angled triangle: a triangle with a right angle
Frequency: the number of times a data value occurs
Sector: part of a circle made by two radii touching the centre
Rotation: turn in a given direction
Protractor: equipment used to measure angles
Compass: equipment used to draw arcs and circles.

Letter and labelling convention

The letter in the middle is the angle
The arc represents the angle

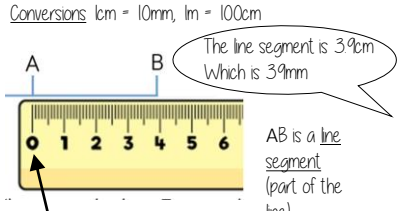


Angle Notation: three letters ABC
This is the angle at B = 113 °

Line Notation: two letters EC
The line that joins E to C

Draw and measure line segments

Conversions 1cm = 10mm, 1m = 100cm



AB is a line segment (part of the line)

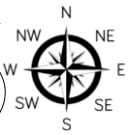
Make sure the start of the line is at 0.

Angles as measures of turn

Clockwise

Anti-Clockwise

East to South is a quarter turn clockwise



Quarter Turn
90°
Clockwise

Half Turn
180°

Three-quarter Turn
270°
Anti-Clockwise

Full Turn
360°

Classify angles

Acute Angles
0°< angle <90°

Right Angles
90°

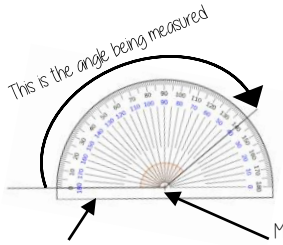
Right angle notation

Obtuse
90°< angle <180°

Reflex
180°< angle <360°

Straight Line
180°

Measure angles to 180°



The base line follows the line segment

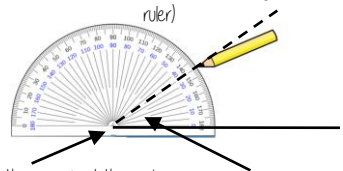
Make sure the cross is at the point the two lines meet

Read from 0° on the base line.
Remember to use estimation.
This is an obtuse angle so between 90 ° and 180 °

Draw angles up to 180°

Draw a 35° angle

Make a mark at 35° with a pencil
And join to the angle point (use a ruler)

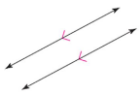


Make sure the cross is at the end of the line (where you want the angle)

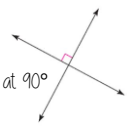
The angle

Parallel and Perpendicular lines

Parallel lines
Straight lines that never meet
(Have the same gradient)



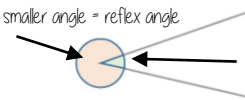
Perpendicular lines
Straight lines that meet at 90°



Angles over 180°

Use your knowledge of straight lines
180 ° and angles around a point
360 °

360 ° - smaller angle = reflex angle



Measure the smaller angle first (less than 180 °

Properties of Quadrilaterals

Square
All sides equal size
All angles 90°
Opposite sides are parallel

Parallelogram
Opposite sides are parallel
Opposite angles are equal
Co-interior angles

Rectangle
All angles 90°
Opposite sides are parallel

Trapezium
One pair of parallel lines

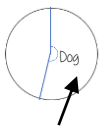
Rhombus
All sides equal size
Opposite angles are equal

Kite
No parallel lines
Equal lengths on top sides
Equal lengths on bottom sides
One pair of equal angles

Draw Pie Charts

Type of pet	Dog	Cat	Hamster
Frequency	32	25	3

$\frac{32}{60}$ "32 out of 60 people had a dog"



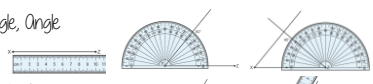
This fraction of the 360 degrees represents dogs

$\frac{32}{60} \times 360 = 192°$

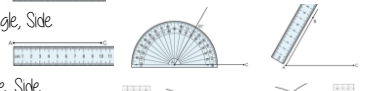
Use a protractor to draw
This is 192°

SAS, SSS, ASA constructions

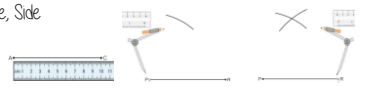
Side, Angle, Angle



Side, Angle, Side



Side, Side, Side



Polygons

3	- Triangle	5	- Pentagon	8	- Octagon
4	- Quadrilateral	6	- Hexagon	9	- Nonagon
		7	- Heptagon	10	- Decagon

If all the sides and angles are the same, it is a **regular** polygon

Year 7 Autumn term Knowledge Organiser for Music

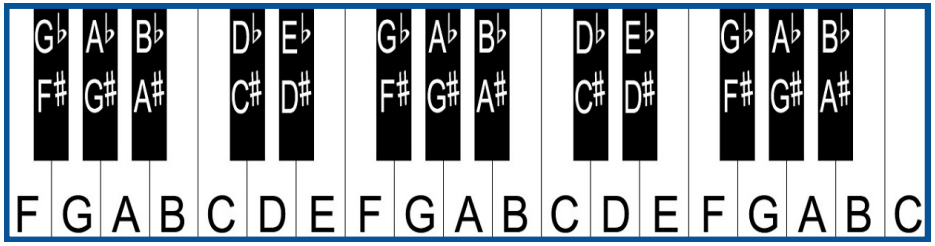
The Elements of Music: "Mad T-shirt"

Element	Definition
Melody	The main tune or musical theme.
Articulation	How the notes are played.
Dynamics	How loud and soft the volume is.
Texture	How the layers of sound fit together.
Structure	How sections of music are organised.
Harmony	The supporting chords used with the melody.
Instruments	The apparatus used to create music.
Rhythm	The pattern of notes and their durations.
Tempo	How fast or slow the speed of the music is.

Note Durations and Rhythms

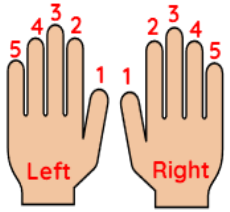
Note Symbol	Technical Name	Note Duration
	**Semibreve**	4 beats
	**Minim**	2 beats
	**Crotchet**	1 beat
	**Quaver**	1/2 beat
	**Semiquaver**	1/4 beat

The Keyboard Note Names and Pitches



Tip for Keyboard Players

When learning the keyboard, use all your fingers and resist just using your 2nd and 3rd fingers. Play the melody with your right hand and the harmony/chords with the left.



Year 7 Autumn term Knowledge Organiser for Music

Textures: Key Terms

Key Term	Definition
Unison	All instruments playing the same melody at the same time.
Polyphonic	Different melodies played together.
Call and Response	A melodic question and answer made by different instruments.
Canon	The same melody line is played at different points by different instruments.

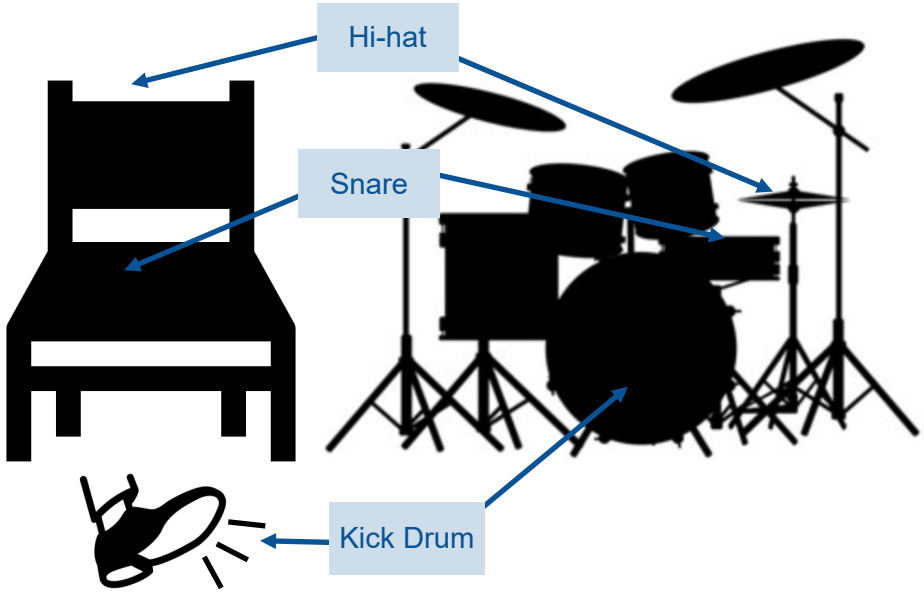
Reading Music on the Stave

Treble Clef
Played by the right hand with higher pitches.

Bass Clef
Played by the left hand with lower pitches.

	Lines of the Stave	Spaces of the Stave
Right Hand (Treble Clef)	**E G B D F** Every Good Boy Deserves Football	**F A C E** **FACE** in the spaces
Left Hand (Bass Clef)	**G B D F A** Green Busses Drive Fast Always	**A C E G** All Cows Eat Grass

Chair Drumming



Dynamics: Key Terms

Dynamic Symbol	Italian Term	Definition
	**Crescendo**	Gradually get louder
	**Diminuendo**	Gradually get softer
ff	**Fortissimo**	Very Loud
f	**Forte**	Loud
p	**Piano**	Soft
pp	**Pianissimo**	Very Soft

Year 7 Autumn term Knowledge Organiser for Music

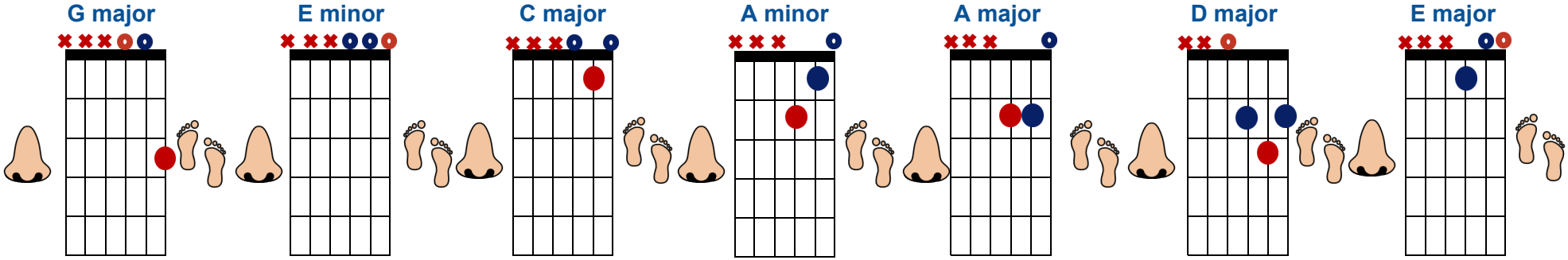
Timbre: Key Terms

Major chords sound happy and uplifting, e.g. C major.

Minor chords sound sad and dark, e.g. C minor

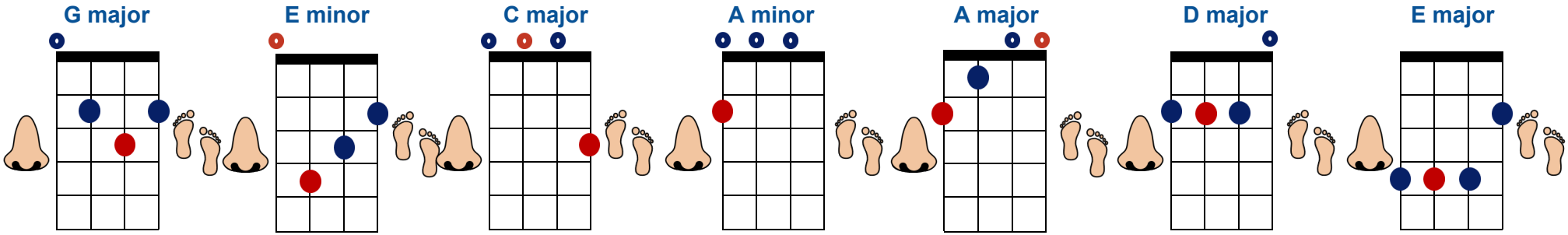
Guitar Chords (Simplified)

When playing the chords for a guitar, you need to remember the nose and the toes rule.



Ukulele Chords

Similarly to the guitar, when playing the chords for the ukulele, you need to remember the nose and the toes rule.



Head

Begin to understand importance of strategy and tactics

Demonstrate a basic knowledge of game rules and recognises errors during a game.

Show a developing ability to read the game and move into the necessary space to replicate a chosen skill

Can respond to changing situations by changing and refining shot selection

Heart (Resilience)

I have worked individually and as a pair in singles and doubles matches this term

I have showed good resilience when I have been losing in a match

I have shown resilience when working with my partner in doubles this term

I have shown good resilience when I have played singles matches this term

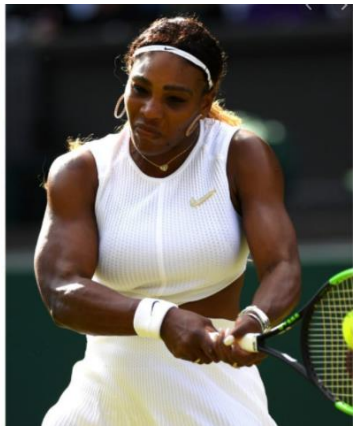
Hands

Demonstrate small movements to meet the ball

I can hold the racket using the correct grip consistently

Use basic techniques in a controlled situation and will use a preferred skill for a majority of all shots

Can hold a basic rally with an opponent in a controlled situation



Year 7 Tennis

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Forehand

Take the racquet back

Finish the shot with the racquet over the shoulder

Ready position

Body facing opponent

Wide stance

Knees slightly bent

Weight on to balls of the feet

Swing the racquet from low to high as you step in to the shot

Backhand

Head

To understand and appreciate the need to make decisions about refinement of technique after each throw

To understand the components of fitness involved in each discipline

To understand the rules in regards to various different events

To plan tactical and strategic ideas within different events

Heart (Resilience)

I have worked individually and as part of a group this term.

I have showed good resilience in a range of athletic activities, including both track and field events.

I have shown good resilience when working individually and as a part of a team across a range of field and track events this term.

I have pushed my body and challenged myself to improve across a range of athletic events.

Hands

To accurately replicate the technique for an effective throw

To understand the rules regarding take off and landing.

To replicate the correct posture, arm action and leg action

To perform a longer distance run refining ability to sustain pace.

Year 7 Athletics

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	Women					Men				
	Time	Date	Age (yrs)	In days	Last 4 yrs vs WR	Time	Date	Age (yrs)	In days	Last 4 yrs vs WR
100	10.49	16-Jul-88	25.47	9303	1.43%	9.58	16-Aug-09	4.39	1602	0%
Short Hurdles	12.21	20-Aug-88	25.37	9268	0.57%	12.8	07-Sep-12	1.33	484	0%
200	21.34	29-Sep-88	25.26	9228	1.87%	19.19	20-Aug-09	4.38	1598	0%
400	47.6	06-Oct-85	28.25	10317	2.58%	43.18	26-Aug-99	14.36	5245	1.32%
400H	52.34	08-Aug-03	10.41	3802	0.15%	46.78	06-Aug-92	21.41	7821	1.00%
800	1:53.28	26-Jul-83	30.44	11120	0.64%	01:40.9	09-Aug-12	1.40	513	0%
1,500	3:50.46	11-Sep-93	20.31	7420	2.64%	03:26.0	14-Jul-98	15.48	5653	1.59%
5,000	14:11.15	06-Jun-08	5.58	2038	0.00%	12:37.35	31-May-04	9.60	3505	1.69%
10,000	29:31.78	08-Sep-93	20.32	7423	1.24%	26:17.53	26-Aug-05	8.36	3053	0.54%
Marathon	2:15.25	13-Apr-03	10.73	3919	3.21%	2:03:23	29-Sep-13	0.27	97	0%
Shot put	22.63	07-Jun-87	26.58	9708	6.89%	23.12	20-May-90	23.63	8630	3.07%
Discus	76.8	09-Jul-88	25.49	9310	11.60%	74.08	06-Jun-86	27.58	10074	2.97%
Long jump	7.52	11-Jun-88	25.57	9338	5.19%	8.95	30-Aug-91	22.35	8163	2.35%
High jump	2.09	30-Aug-87	26.35	9624	0.48%	2.45	27-Jul-93	20.44	7466	2.86%
			21.87		2.75%			12.50		1.24%

Head

I explain how my performances are similar to and different from others

I know the a few basic rules to play the game.

I can explain the fitness requirements for rounders.

I can comment on skills, techniques and set targets to improve performance.

Heart (Resilience)

I keep going and try my best to overcome errors and mistakes.

I have showed good resilience when playing as a team.

I have been resilient when batting in a game.

To show patience and resilience when fielding in rounders.

Hands

I can throw and catch with some success over short distances.

I can field the ball over a short distance and I can demonstrate a good grip and stance when batting.

I have some success when hitting the ball

I can bowl the ball with accuracy on a consistent basis.

Year 7 Rounders

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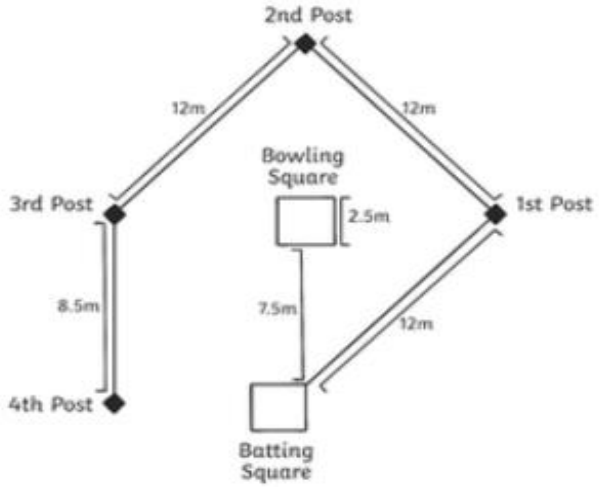


Sideways on
Feet shoulder width apart
Knees bent

Batting arm straight back
Bat up at 90 degrees to arm

Transfer weight from back to front foot
Follow through in direction you want the ball to go

Technique

Basic

Grip ball with index/middle finger and thumb

2 steps in to bowl

Bent knees

Advanced

Change pace of bowl

Change angle of bowl

Add spin to bowl

Donkey drop

Scoring

- 1 rounder if 4th Post reached and touched before next ball is bowled.
- 1 rounder if 4th Post reached on no ball (you cannot be caught out).
- 1/2 rounder if 4th Post reached without hitting the ball.
- 1/2 rounder if 2nd Post reached after hitting the ball (you stay at 1st whilst ball is in the backward area).
- Penalty 1/2 rounder for an obstruction by a fielder.
- Penalty 1/2 rounder for 2 consecutive no balls (to the same batter).
- 1 rounder for a backward hit if 4th Post reached (you stay at 1st whilst ball is in the backward area).

Head

I explain how my performances are similar to and different from others

I know the a few basic rules to play the game

I can explain the fitness requirements for Cricket

I can comment on skills, techniques and set targets to improve performance.

Heart (Resilience)

I have worked as a team in various situations

I have showed good resilience when playing as a team

I have been resilient when batting in a game

I have shown resilience when working in a team this half term

Hands

I can throw and catch with some success over short distances.

I can field the ball over a short distance and I can demonstrate a good grip and stance when batting.

I have some success when hitting the ball

I can demonstrate both the 'Short' and 'Long' barrier when fielding.

Year 7 Cricket

The Long Barrier

Preparation

→ Move into the line of the ball

→ Make the barrier at right angles to the path of the ball

Making the Barrier

→ Place body in a low position with hip and non throwing shoulder slightly facing ball

→ Kneel on non throwing knee

The Pick Up

→ Ball is stopped in centre of the barrier

Grip

- Two fingers either side of the seam
- Thumb on the bottom of the seam

The bound

- Head level
- Arms thrown up
- Ball held by chin to start
- Body leans back away from the batter

The coil

- Front arm pulled back
- Make a figure of six with bowling arm
- Body leans away from the batter
- Back foot lands parallel to the crease

The release

- Release at about one O'clock
- Arm brushes ear
- Look over opposite shoulder
- Remain tall

The follow through

- Follow the ball down the wicket

CHAPTER 4:

DESERT TO GARDEN

Knowledge organiser

Key vocabulary	
Paschal Mystery	The belief that Jesus' death and resurrection bring salvation to every human being.
sacrament	Visible signs of God's grace that make real what they symbolise; also the name given to the ceremonies that contain these signs.
Passover	A Jewish festival that celebrates God saving the Jewish people from slavery in Egypt.
Eucharist	The sacrament in which Catholics receive the body and blood of Christ; also called Holy Communion, the Lord's Supper, the Breaking of the Bread and Mass.
Sacrifice of the Mass	The belief that Jesus' sacrifice is really made present to Catholics during the Eucharist.
transubstantiation	The process by which the bread and wine actually become the body and blood of Jesus at the moment of consecration.
Holy Communion	Another name for the Sacrament of Eucharist.
Lord's Supper	Another name for the Sacrament of Eucharist.
Blessed Sacrament	A term that refers to the body and blood of Jesus in the Eucharist.

OPTIONS	
Ethical	The **world food crisis** presents Catholics with an **ethical and religious duty** to help those most affected. The Eucharist commits Catholics to serve the poor, and Bishop Theotonius Gomes reminds Catholics that providing basic needs is a way to treat others with respect and dignity.
Artistic expression	The Sacrament of the Eucharist and the Last Supper are two common themes in Catholic art. Different artists focus on different aspects of the sacrament. For example, ***Life of Jesus Mafa: The Last Supper*** shows Jesus and the apostles as African men in an everyday environment. ***Last Supper*** by Pascal Dagnan-Bouveret is a more traditional painting of the Last Supper.
Lived Religion	One way in which Catholics show their devotion to the Real Presence of Jesus is by holding **Eucharistic processions**. In these, the **Blessed Sacrament** is carried in a procession around a holy site. These processions vary between countries as they are influenced by local customs and traditions.

The Paschal Mystery

For the Catholic Church, the term 'Paschal Mystery' means three things:

- The **actual events** of Jesus' arrest, trial, death on the cross and resurrection from the dead.
- The **significance of those events**: Catholics believe that Jesus' death on the cross frees human beings from sin, and that his resurrection opens the way to a new life with God.
- The idea that Jesus' death and resurrection are **made present in the life of the Church today**. They can be experienced by Catholics most directly in the celebration of the Mass and in the seven sacraments.

The seven sacraments

- **Sacraments** are **visible signs of God's grace**. These religious ceremonies make God's invisible, saving power visible and present to those who receive it.
- Catholics must receive the three **Sacraments of Initiation** to become a full member of the Church: Baptism, Confirmation and Eucharist.
- The **Sacraments of Healing** are Reconciliation and the Anointing of the Sick.
- The **Sacraments at the Service of Communion** are Holy Orders and Matrimony.
- Catholics believe the sacraments **nourish and strengthen their faith**.

The Sacrament of the Eucharist…

- Catholics believe the Eucharist is the most important sacrament. It is '**the source and summit of Christian life**' (CCC 1324).
- The word Eucharist means 'thanksgiving'. The sacrament is known by **many names** including the Lord's Supper, Holy Communion, the Breaking of the Bread, and Mass. Each name gives a different insight into the significance of the sacrament.
- **The Liturgy of the Eucharist** is the high point of the Mass. It is when the bread and wine become the body and blood of Jesus, and these are offered to the congregation.

…and its significance

- The Eucharist is **significant** as it can bring a person closer to God, strengthen faith, and provide forgiveness and protection from sin. It unites Catholics together as the Church, and commits Catholics to serve the poor.
- The **Last Supper** was a meal that Jesus shared with his disciples to celebrate the Jewish Passover. During this meal, Jesus **instituted the Sacrament of the Eucharist**.
- Catholics believe that when they celebrate the Eucharist today, the events of the Last Supper and the sacrifice Jesus made become **really present** for them in the Mass.
- Jesus' sacrifice is **foreshadowed** in the first Passover meal described in the Old Testament.
- **Jesus is present** in the Mass in four ways: in the assembly of the faithful, in the reading of the scripture, in the person of the priest, and in the Blessed Sacrament.
- Most Christians around the world agree that Jesus is present in the Eucharist, but they may have **different views** on how this happens. For example, most Anglicans believe that Jesus is really *spiritually* present.
- Some Christians (such as Baptists) do not believe in the Real Presence of Jesus, and instead believe that the Eucharist is about commemorating the Last Supper.

Science – Year 7 – Term 3 part 1 – Matter and Energy

- Chemical changes make new substances whereas physical changes usually involves a change of state.
- Signs that a chemical reaction has occurred are: fizzing and flames.
- In a chemical reaction, the particles are rearranged to produce new substance
- Catalysts help speed up the rate of reaction.
- In the equation:
  magnesium + oxygen → magnesium oxide,
  magnesium and oxygen are the reactants;
  magnesium oxide is the product.
- A fuel is a material that releases energy in the form of heat. Examples of fuels are coal, oil and gas.
- Combustion is another word for burning.
- The equation for burning is:
  fuel + oxygen → carbon dioxide + water
- Thermal decomposition involves heating a substance until it breaks down into different parts.
- The products of the decomposition of calcium carbonate are calcium oxide and carbon dioxide.

The general formula for the reaction between an acid and a metal is:
acid + metal → salt + hydrogen

For example: hydrochloric acid + sodium → sodium chloride + hydrogen
$2HCl + 2Na \rightarrow 2NaCl + H_2$

When an acid reacts with an alkali, a neutralisation reaction takes place and a salt and water are produced.

The general formula for this kind of reaction is acid + alkali → salt + water

hydrochloric acid + sodium hydroxide → sodium chloride + water

$HCl + NaOH \rightarrow NaCl + H_2O$

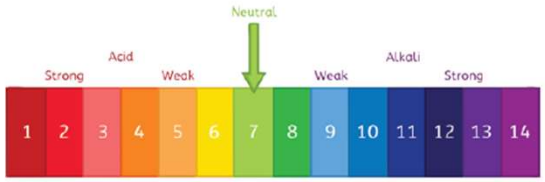
Naming Salts

The first part comes from the metal in the metal carbonate, oxide or hydroxide. The second part of the name comes from the acid that was used to make it.

Acid Used	Salt Produced
hydrochloric	chloride
nitric	nitrate
sulfuric	sulfate

For example, sodium chloride.

pH Scale



In aqueous solutions, acids produce H^+ ions and alkalis produce OH^- ions.

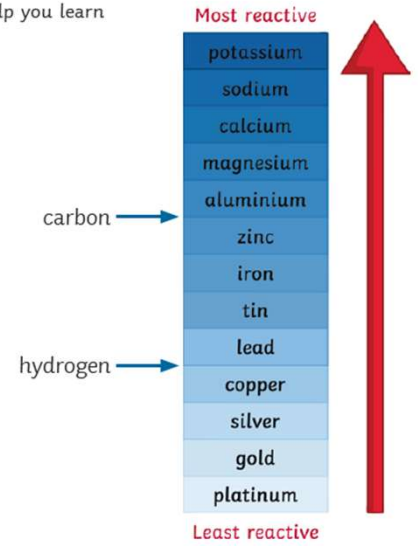
Neutral solutions are pH7 and are neither acids nor alkalis.

For example, in neutralisation reactions, hydrogen ions from an acid react with hydroxide ions from an alkali to produce water:

$H^+ + OH^- \rightarrow H_2O$

Here's a **mnemonic** to help you learn the order.

purple (potassium)
slime (sodium)
can (calcium)
make (magnesium)
a (aluminium)
careless (carbon)
zebra (zinc)
insane (iron)
try (tin)
learning (lead)
how (hydrogen)
camels (copper)
surprise (silver)
gorillas (gold)



The reactivity series is a league table for metals. The **more reactive** metals are near the **top** of the table with the **least reactive** near the **bottom**. In chemical reactions, a more reactive metal will displace a less reactive metal.

Reactions of Metals with Water

Metals, when reacted with water, produce a metal hydroxide and hydrogen.

lithium + water → lithium hydroxide + hydrogen

$2Li + 2H_2O \rightarrow 2LiOH + H_2$

The more reactive a metal is the faster the reaction.

Exothermic and Endothermic Reactions

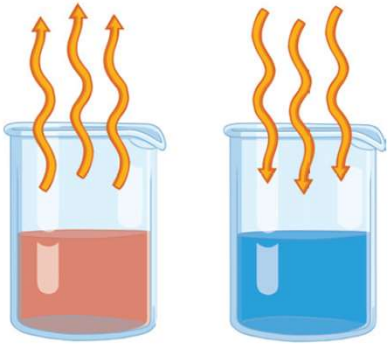
When a chemical reaction takes place, **energy** is involved. Energy is transferred when chemical **bonds are broken** and when new **bonds are made.**

Exothermic reactions are those which involve the transfer of energy **from the reacting chemicals to** the surroundings. During a practical investigation, an exothermic reaction would show an **increase in temperature** as the reaction takes place.

Examples of exothermic reactions include **combustion, respiration and neutralisation** reactions. Hand-warmers and self-heating cans are examples of everyday exothermic reactions.

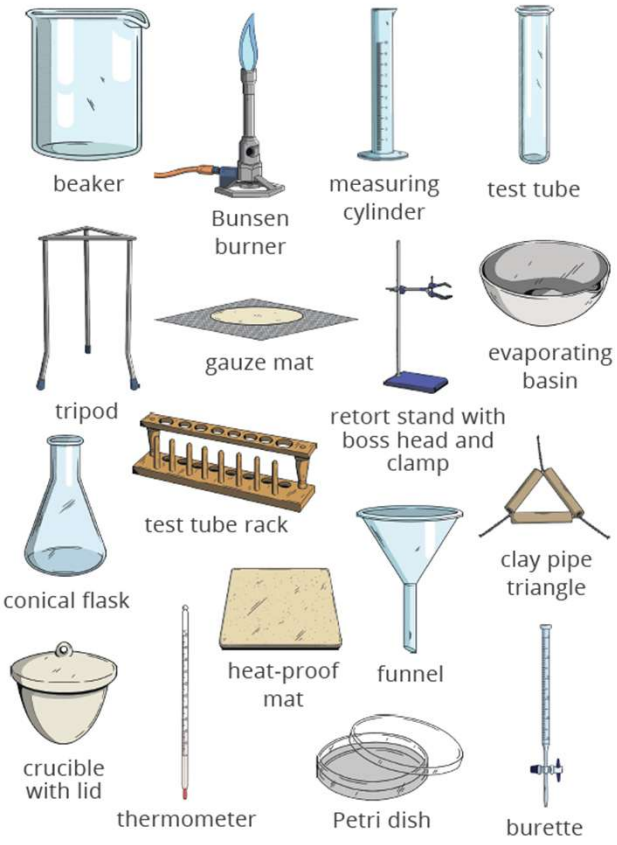
Endothermic reactions are those which involve the transfer of energy **from the surroundings to** the reacting chemicals. During a practical investigation, an endothermic reaction would show a **decrease in temperature** as the reaction takes place.

Examples of endothermic reactions include the **thermal decomposition** of calcium carbonate.
Eating **sherbet** is an everyday example of an endothermic reaction. When the sherbet dissolves in the saliva in your mouth, it produces a cooling effect. Another example is **instant ice packs** that are used to treat sporting injuries.

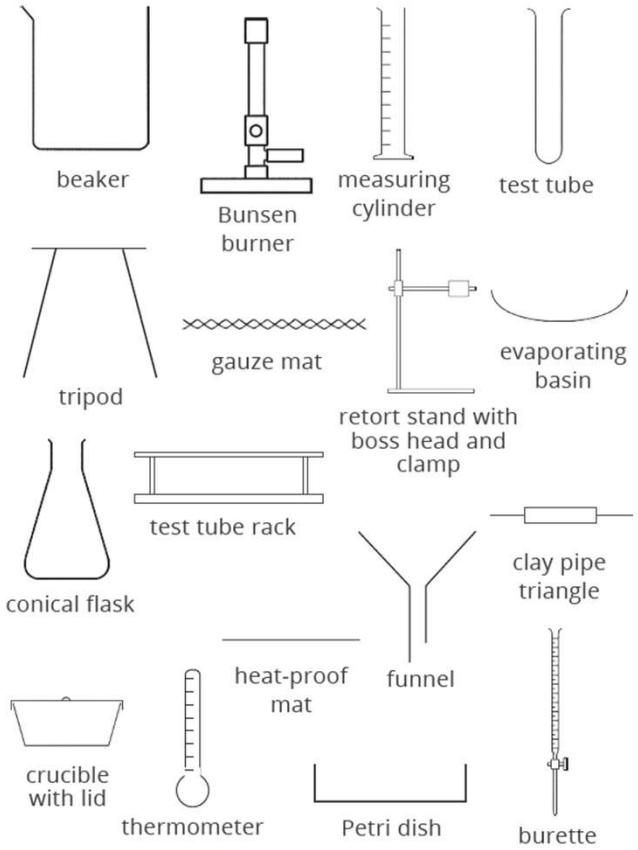


Science – Year 7 – Term 3 part 2 – Thinking Scientifically

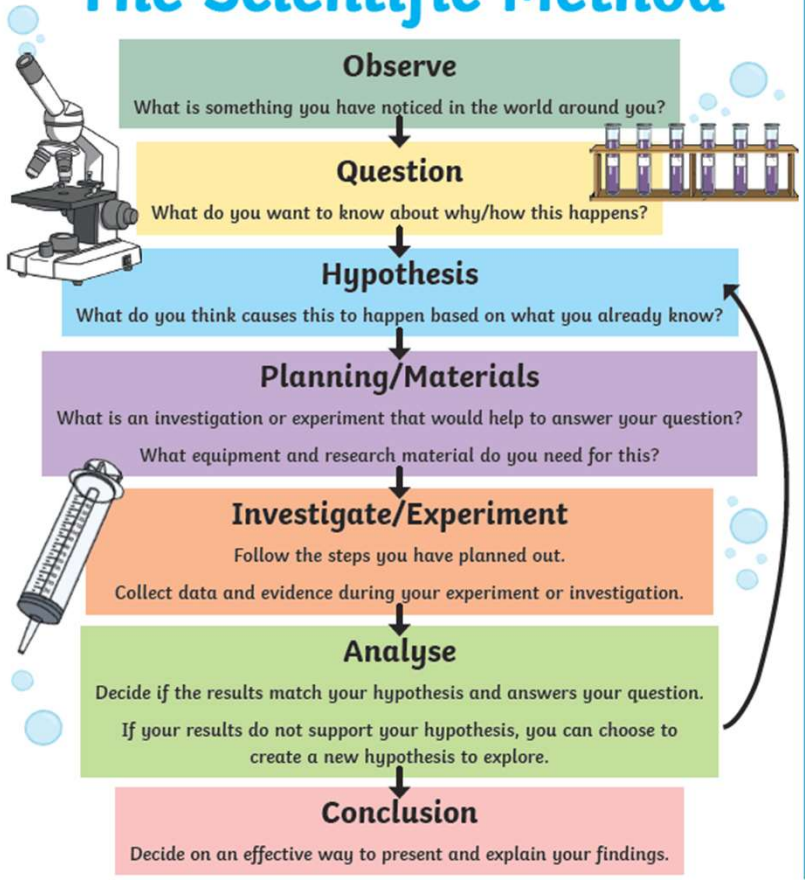
Science Equipment



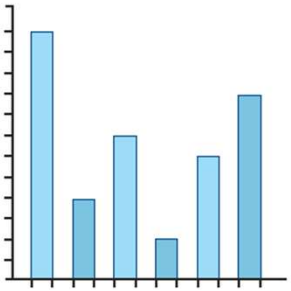
Science Equipment



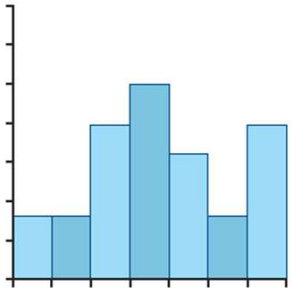
The Scientific Method



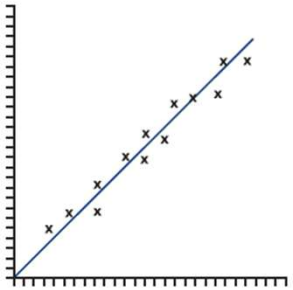
Key Terms	Meaning
accurate	close to the true value or in other words the value that you would expect.
repeatable	if the original experimenter repeats the investigation using same method and equipment and obtains the same results.
independent variable	the values are changed or selected.
dependent variable	the values are changed or selected.
control variables	all other variables need to be kept the same to get valid results.
fair test	one in which only the independent variable has been allowed to affect the dependent variable.
reproducible	if the investigation is repeated by another person, or by using different equipment or techniques, and the same results are obtained.



When one of our variables is discrete, we draw a bar chart.



When continuous data is grouped into categories, we draw a histogram.



When both variables are continuous, we draw a scatter graph.